(d) the number of ongoing research projects indicating percentage of those commissioned by Government and private organisations?

THE MINISTER OF SCIENCE AND TECHNOLOGY (SHRI KAPIL SIBAL): (a) to (d) Information is being collected and will be laid on the table of the House.

Platinum Jubilee of national academy of science

2065. SHRI RAJKUMAR DHOOT: Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

(a) whether it is a fact that Hon'ble Prime Minister while participating in platinum jubilee of National Academy of Science has conceded that China and Korea have overtaken India in mastering of science and technology;

(b) if so, the reasons therefor; and

(c) whether Government propose to raise efficiency and expertise level of scientists, researchers and technocrats?

THE MINISTER OF SCIENCE AND TECHNOLOGY (SHRI KAPIL SIBAL): (a) and (b) At the platinum jubilee celebrations of National Academy of Sciences the Hon'ble Prime Minister had drawn attention towards the significant progress made by China and Korea in the field of science and technology in the recent past. While progress of India in areas such as Information Technology has been hailed all over the world, the concern expressed with respect to China and Korea are based on their fast pace of basic research. In 1980, India, China and South Korea published 14983, 924 and 175 papers respectively in journals covered by the Science Citation Index (SCI). In 2005, on the other hand, the figures were 19448, 53513 and 23515 respectively. Amongst developing countries, however, India ranks 1st in terms of research output in agriculture, plant and animal sciences, energy and environment and biology and biochemistry. It ranks 2nd following China closely, in materials science, chemistry, physics, geosciences, pharmacology & toxicology, space sciences, mathematics, molecular biology and immunology.

This issue has been under intense debate and examination in several forums in recent times including the Scientific Advisory Council to the Prime Minister. The two main reasons are (1) sub-critical funding to established groups in the country; (2) shrinking of research base in the

univeristy sector; and (3) declining interests of students to pursue science. Universities are the mainstay of scientific reserach all over the world, but, in our country, universities haye been suffering because of a variety of financial and government problems leading to, among other things, depletion of faculty, impoverishment of research infrastructure and lack of opportunities for the faculty for updating their knowledge. Most universities fall in the domain of State Government and they need to address the problem urgently.

(c) The Government of India, on its part, has taken a number of steps to rejuvenate and promote scientific research. The Plan Allocation of scientific departments has been doubled from about Rs. 12000 crores in the IX Plan to about Rs. 25000 crores in the X Plan and it is planned to increase it further in the XI Plan with special focus on massive rejuvenation of science in the university system along with a new scheme for promoting Innovation in Science Pursuit for Inspired Research (INSPIRE). The Research Infrastructure programme of DST in a targeted programme to upgrade the laboratory infastructure in universities and other higher educational institutions. Several institutions, centres of excellence and facilities in emerging and frontline areas have also been established; for example, in the areas of Brain Research, Marine Biotechnology, Stem Cell and Tissue Engineering, Soft Computing, Water Resources Development, Nanophosphors, Display Technology, Fuel Cell Technology, Ultrafast Processes, Protein Research, etc. More recently, three new Indian Institutes of Science Education and Research (IISERs) have been set up at Kolkata, Pune and Chandigarh which, apart from carrying out frontline and internationally competititve research, would offter M.Sc. Programmes in a multi-disciplinary and academically flexible and research-oriented environment. Various agencies of Government of India have now attractive scholarship, fellowship and research support schemes for scientific manpower of all ages starting right from the school level.

Nanotechnology in the country

2066. SHRI THANGA TAMIL SELVAN: Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

(a) the advantages of using nanotechnology in the country;